March 17, 1925.

1,530,199

A. H. OPPERMAN

ELECTRICAL CURLING IRON HEATER

Filed July 25, 1923

Fig. 1.

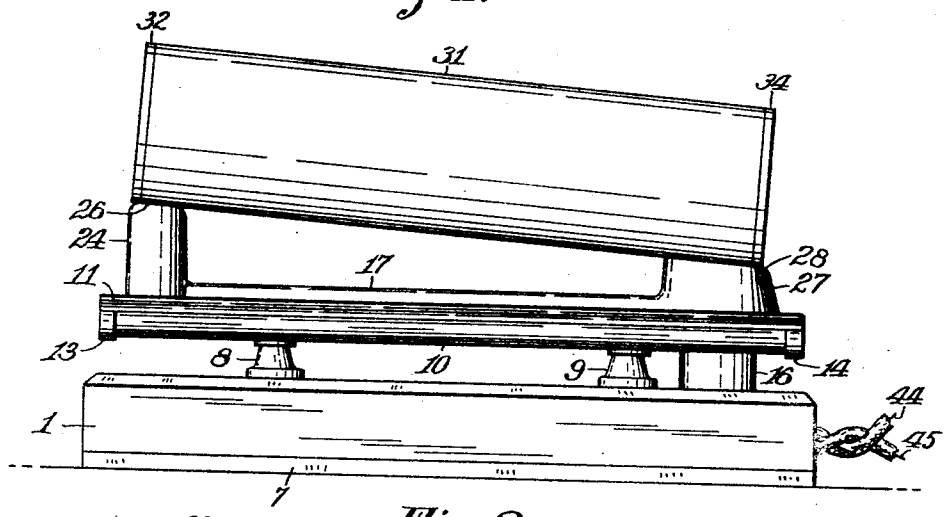


Fig. 2.

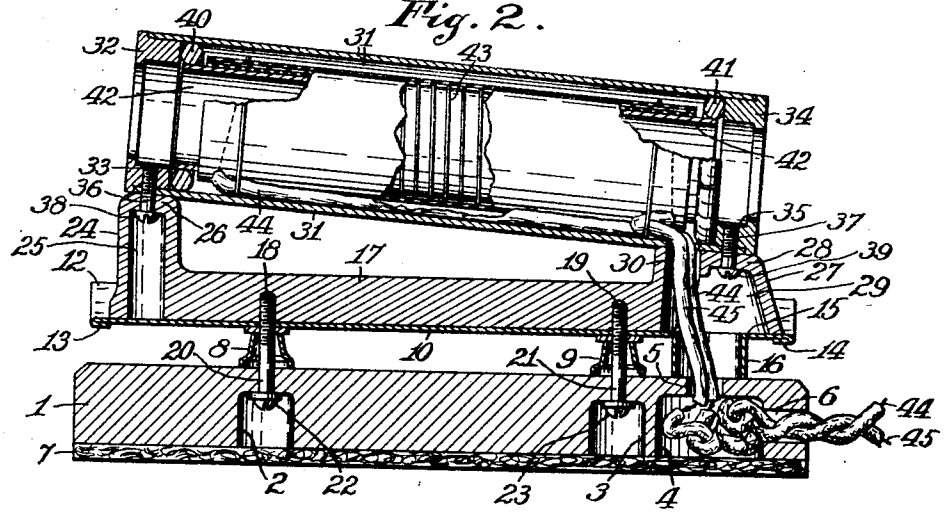


Fig. 3.

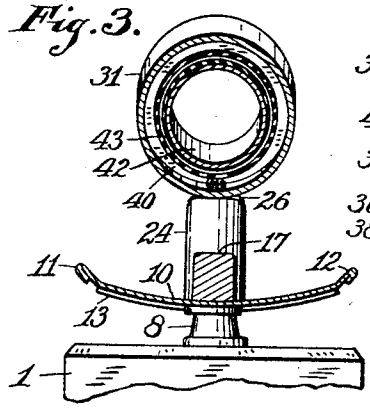
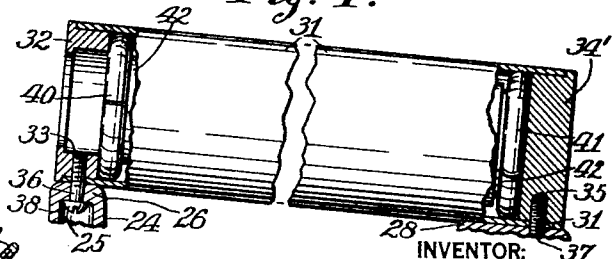


Fig. 4.



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UNITED STATES PATENT OFFICE.

AUGUST H OPPERMAN, OF INDIANAPOLIS, INDIANA.

ELECTRICAL CURLING-IRON HEATER.

Application filed July 25, 1923. Serial No. 653,763.

To all whom it may concern:

Be it known that I, AUGUST H. OPPERMAN, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Electrical Curling-Iron Heater, of which the following is a specification, reference being had to the accompanying drawings and to the letters and figures of reference marked thereon.

This invention relates to an improved heater constructed so as to be portable and to be electrically heated, the invention having reference more particularly to a heater that is particularly adapted for heating curling-irons or other articles.

An object of the invention is to provide an electric heater which shall be so constructed as to be convenient for use for various purposes when moderate heating is desired, and which may be safely placed and used on tables or other furniture without injury thereto.

Another object is to provide an improved electrical heater which shall be so constructed as to be adapted for heating articles in the interior thereof and also other articles on the outer side of the heater.

A further object is to provide an improved electric heater which shall be of simple design and few parts permitting inexpensive construction, which shall be durable and economical in use, and which may be readily repaired at small cost if necessary.

A still further object is to provide an improved hollow electric heater which shall have a combined shelf and shield on which to temporarily place heated articles.

With the above-mentioned and other objects in view, the invention consists in a structurally improved electric oven adapted to apply heat both internally and externally; and, the invention consists also further in the novel parts and combinations and arrangements of parts as hereinafter particularly described and further defined in the claims appended hereto.

Referring to the drawings,—Figure 1 is a side elevation of the improved heater as preferably constructed; Fig. 2 is a longitudinal vertical central section of the heater; Fig. 3 is a fragmentary transverse section of the heater; and, Fig. 4 is a fragmentary side view partially in section showing details and a modification of the oven structure.

In the different figures of the drawings similar reference characters indicate corresponding elements or features of construction herein referred to in detail.

As preferably constructed the improved heater comprises a slab-shaped base 1 which preferably is oblong in plan and a non-metallic poor conductor of heat to guard against injury to furniture upon which it may be placed, and the base has two recesses 2 and 3 extending upward from the under side thereof, and also a similarly arranged chamber 4 adjacent to one end of the base, the upper portion of the base having an aperture 5 therein extending from the chamber to the top of the base, the base having also a horizontal aperture 6 extending from the chamber to the adjacent end of the base. Preferably a suitable pad 7 is secured to the bottom of the base and closes the lower ends of the recesses and the chamber, the pad preferably being composed of felt or other material tending to deaden sounds and to prevent the base from causing scratches on fine furniture, the pad being a non-conductor of heat.

The heater being provided with a device for holding heated articles, the device preferably is arranged at a suitable distance above the base, and for this purpose the top of the base has two small hollow posts 8 and 9 arranged thereon above the recesses 2 and 3 respectively, and a pan 10 is arranged thereon so as to support articles thereon, the top of the pan being concave to deflect heat upwardly and preferably having slightly upturned edge portions 11 and 12, the ends of the pan having stiffening beads 13 and 14 respectively formed of metal turned under the bottom of the pan. Adjacent to one end of the pan the transversely middle portion thereof has an aperture 15 in which a tube 16 is connected that rests upon the top of the base so as to extend about the top of the aperture 5. A center bar 17 preferably is arranged upon the pan and is nearly as long as the pan, the lower portion of the bar having screw-threaded holes 18 and 19 therein receiving screws 20 and 21 that are inserted through the recesses 2 and 3 respectively and extend through the posts 8 and 9 respectively and also through suitable holes in the pan, the screws having heads 22 and 23 respectively that are seated in the recesses. This arrangement provides two shelves separated by the bar 17 and separated also from the base, upon

which two curling-irons may be placed after having been heated and kept separated by the center bar 17. The center bar has a pillar 24 adjacent to one end thereof which has a cavity 25 therein extending upward from the bottom of the bar, the pillar having an inclined top 26. The center bar has also a hollow stand 27 adjacent to the opposite end thereof, the stand having an inclined top 28 corresponding in inclination to the top 26, the stand being less in height than the pillar 24, and it has a chamber 29 that incloses the upper end of the tube 16, the top 28 having a channel 30 therein extending from the chamber to the upper face of the top.

The oven portion of the heater comprises a hollow cylinder or shell 31 that is arranged upon the inclined tops 26 and 28, the cylinder having an annular head 32 fitting closely in its higher end provided in its lower portion with a screw-threaded hole 33. The opposite end of the cylinder or shell has an annular head 34 secured therein, or in some cases a solid head 34′ as shown in Fig. 4, the under portion of the head having a screw-threaded hole 35 therein. Screws 36 and 37 are arranged in the inclined tops 26 and 28 respectively and extend into suitable openings in the under side of the wall of the cylinder and into the holes 33 and 35 respectively, the screw 36 having a head 38 arranged in the recess 25, the screw 37 having a head 39 arranged in the chamber 29. Two spacing rings 40 and 41 of suitable material are arranged within the cylinder or shell adjacent to the inner sides of the two heads respectively, and a hollow core 42 is arranged with its end portions in the rings and supported thereby, the core preferably being separated from the heads to avoid unnecessary transmission of heat to the heads. The core has a heating coil 43 thereon which is suitably covered so as to be electrically insulated from the core and the coil has terminal conductors 44 and 45 that extend through the aperture 30, the chamber 29, the tube 16, the aperture 5 and the chamber 4 and out through the aperture 6 to be connected with a suitable electric circuit.

In practical use, the base is placed in any convenient position and electric current may be suitably supplied to the conductors 44 and 45, resulting in the heating of the coil 43 and the core 42, the cylinder or shell 31 becoming moderately heated by radiation through the space provided between the coil and the shell, permitting small articles such as gloves to be dried upon the shell after having been cleaned. The shelves deflect heat away from the base and from furniture supporting the base. Curling-irons are to be inserted through the head 32 into the core and left until sufficiently heated; but in case they become heated to a higher degree than desired they can be placed upon the shelves until they become tempered, and after having used the irons they may be placed upon the shelves to cool and without the danger of injuring furniture or garments as may occur when there happens to be no convenient place for the used but still hot irons.

What I claim as new is:—

1. An electrical heater including a base having a channel, a shell having two open spacers therein adjacent to its opposite ends respectively and two heads at the outer sides of the spacers, a hollow core supported at its ends in the spacers, supporting means secured to the base and supporting the shell, a heating coil on the core, and a circuit connected with the coil and extending through the shell and the channel in the base.

2. An electrical heater including a heating oven, a bar having supports on its top secured to and directly supporting the lower portion of the oven, and a pan secured to the under side of the bar and directly supporting the bar, the pan projecting laterally beyond the opposite sides of the bar.

3. An electrical heater including a base having two posts on its top, two shelves supported upon the posts and extending laterally therefrom, a center bar supported also upon the posts and having a pillar and a stand upon its top, the pillar being taller than the stand, and a heating oven secured to the top of the pillar and the stand.

4. An electrical heater including a portable base having a channel extending through a portion thereof, a heater oven and two heat-deflecting shelves having supporting means therefor mounted upon the base, the oven comprising a heating coil, the shelves extending in opposite directions from the supporting means and over the base, and an electrical circuit connected with the heating coil and extending through the channel in the base.

5. An electrical heater including a base having a chamber closely adjacent to one end thereof, a hollow oven having a support mounted upon the base, the oven comprising a heating coil and being longitudinally inclined, the lower portion of the oven being situated above the chamber in the base, the higher end of the oven being open, and a circuit connected with the heating coil and extending through said chamber.

6. In an electrical heater, the combination of a base, shelves having a single base portion mounted upon the base, and a hollow electrically-heated oven having supporting means secured upon the base portion of the shelves.

7. In an electrical heater, the combination of a base, a cylindrical shell and two shelves mounted upon the base, the shell having two heads fixed thereto, one of the heads having an opening therein, two spacing rings sup-

ported in the shell adjacent to said heads respectively, a hollow core extending into the rings and being supported thereby, and a heating coil on the exterior of the core between the spacing rings.

8. In an electrical heater, the combination of a base having two recesses spaced apart in the under side thereof, two hollow posts seated upon the base above the recesses respectively, a center bar supported upon the posts and having two screw-threaded holes coinciding with the spacing of said recesses, two screws extending from said recesses respectively and into said holes respectively, the screws having heads arranged in the recesses, a hollow heating oven supported upon the center bar, and a pad secured to the bottom of the base and closing said recesses.

9. In an electrical heater, the combination of a base having two posts on the top thereof, the base having also a chamber in its bottom portion close to one end thereof and two apertures extending from the chamber, one of the apertures extending vertically to the top of the base and the other to the adjacent end of the base, a pan supported upon the two posts, a center bar supported upon the pan and secured thereto and to the posts, the center bar having a pillar and a stand thereon, the stand having a chamber in the lower portion thereof and a channel extending from the chamber to the top of the stand, a tube connected with said vertical aperture and the chamber in said stand, a heating oven secured upon said pillar and said stand and comprising a heating coil having conductors extending down through said channel and the chamber in said stand and through said tube and also through the chamber and the apertures in the base, and a pad secured to the bottom of the base and closing the lower end of the chamber therein.

10. In an electrical heater, the combination of a portable base having a post on the top thereof, a shield pan supported by the post and extending therefrom in opposite directions over the base and constituting two heat-deflecting shelves, a hollow cylinder arranged above the pan and having a support co-operating with the pan for support, a hollow core supported in the cylinder, a heater coil on the core, and a circuit connected with the coil.

11. In an electrical heater, the combination of a portable base, supporting means mounted upon the base, a hollow electrical heating oven mounted upon the supporting means and comprising a hollow core and an electrical resistance coil thereon, a shelf bodily supported by the supporting means between the base and the oven and extending outward over the base, and an electrical circuit connected with the coil and extending through the base.

12. In an electrical heater, the combination of a portable base, a hollow electrical heating oven arranged above the base and comprising a resistance coil and a hollow core supporting the coil, an electrical circuit connected with the coil, means supported by the base and supporting the oven, and a combined shelf and shield arranged above the base and separate from the oven and having an appropriate support relatively to the base.

13. In an electrical heater, the combination of a hollow electrical oven, a portable base to support the oven upon a stand, the base being arranged below the oven, a heat-deflecting shield arranged between the oven and the base to shield the base and the stand from the oven heat and constituting two oppositely extending shelves, and means to support the shield and the oven in place.

In testimony whereof, I affix my signature on the 16th day of July, 1923.

AUGUST H. OPPERMAN.